

Perspectives on the Analysis M&S Community

Dr. Jim Stevens

OSD/PA&E

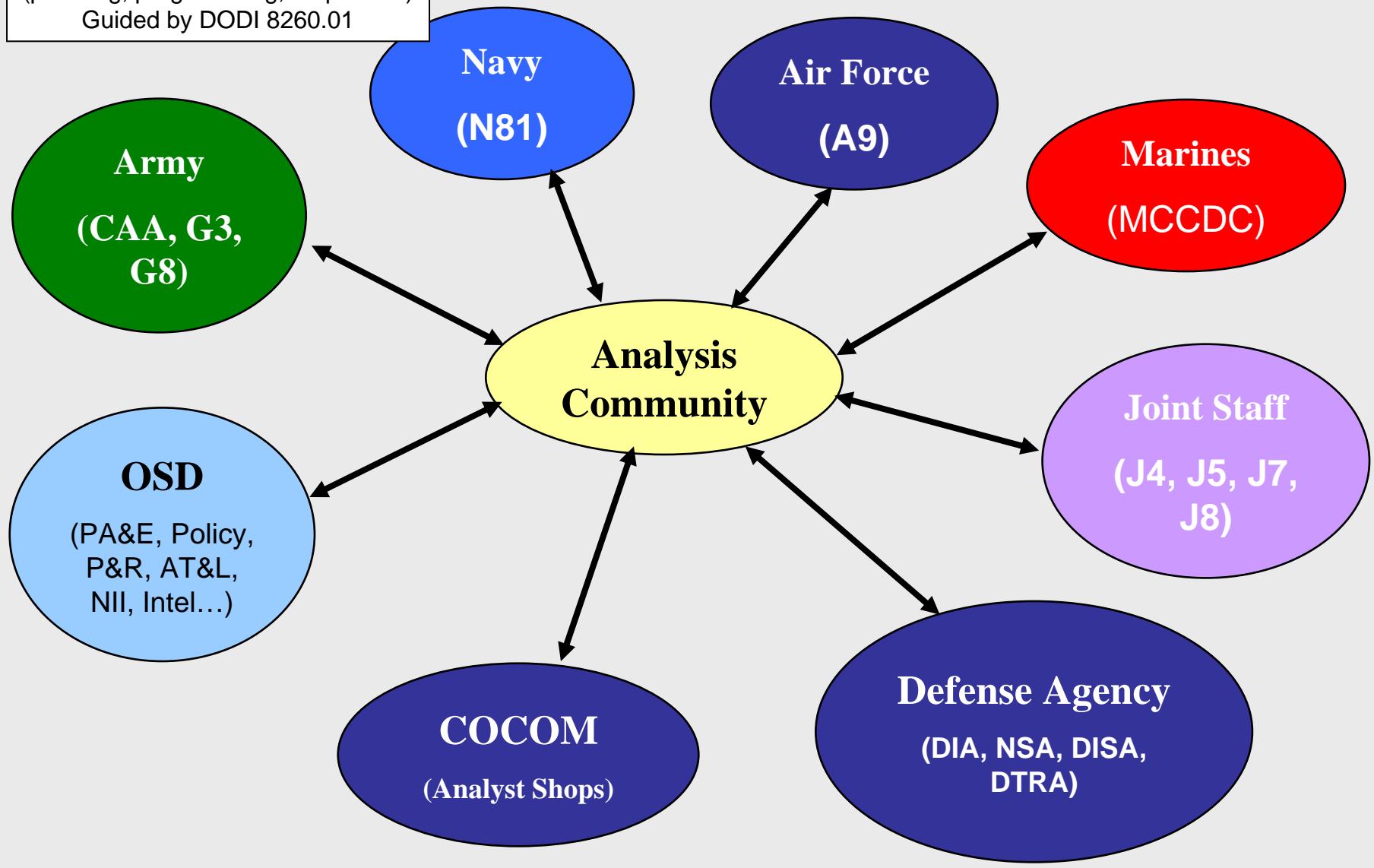
Director, Joint Data Support

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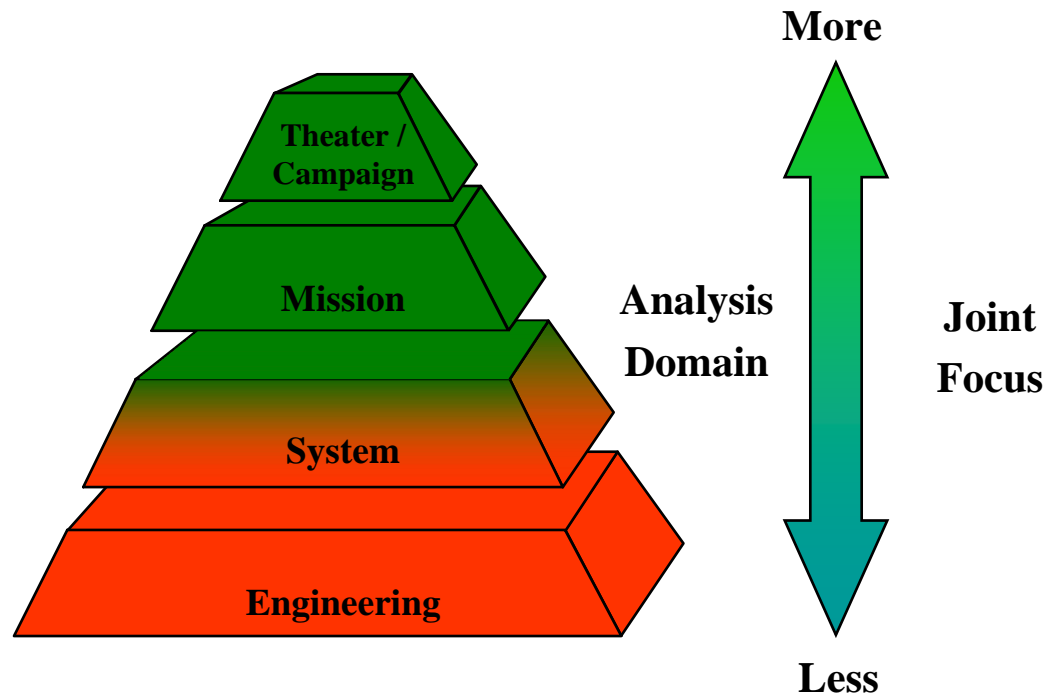
Who We Are

DoD Analysis Community
(planning, programming, acquisition)
Guided by DODI 8260.01



What We Do

- *We perform analysis to support senior level defense decisions (e.g., planning, programming, and acquisition)*
- *Recent emphasis on Irregular Warfare (IW), Stability Operations, Homeland Defense (HD)*



Examples of Decisions We Inform

- ***What capabilities do we need to find and neutralize WMD? (Counter WMD Study)***
- ***What capabilities do we need to execute our war on terror strategy? (GWOT X-Game)***
- ***What is the best mix of tactical air forces? (Joint Air Dominance Study)***
- ***Are our projected future forces sufficient to meet the defense strategy? (Operational Availability Studies)***
- ***What is the best composition (number, mix, and characteristics) of the future tanker fleet? (Tanker Analysis of Alternatives)***
- ***What capabilities does DoD need to support civil authorities when responding to a domestic disaster? (H/D Civil Support Study)***

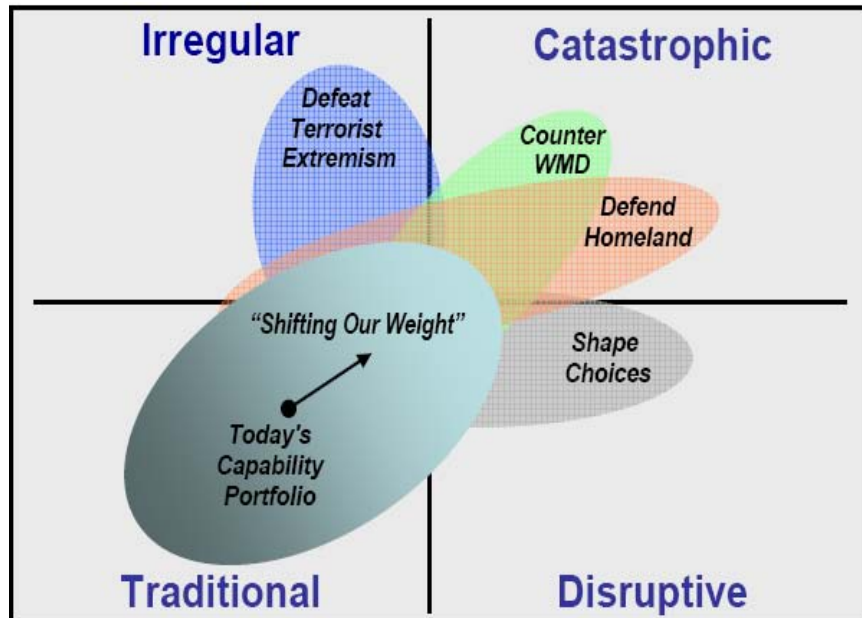
Shape Leadership Decisions: Help answer the question -

How should DoD invest its scarce resources?

Analysis Community Vision

- A robust and inter-connected analytical community which supports the formulation, discussion, and assessment of National Security options across DoD through the use of M&S

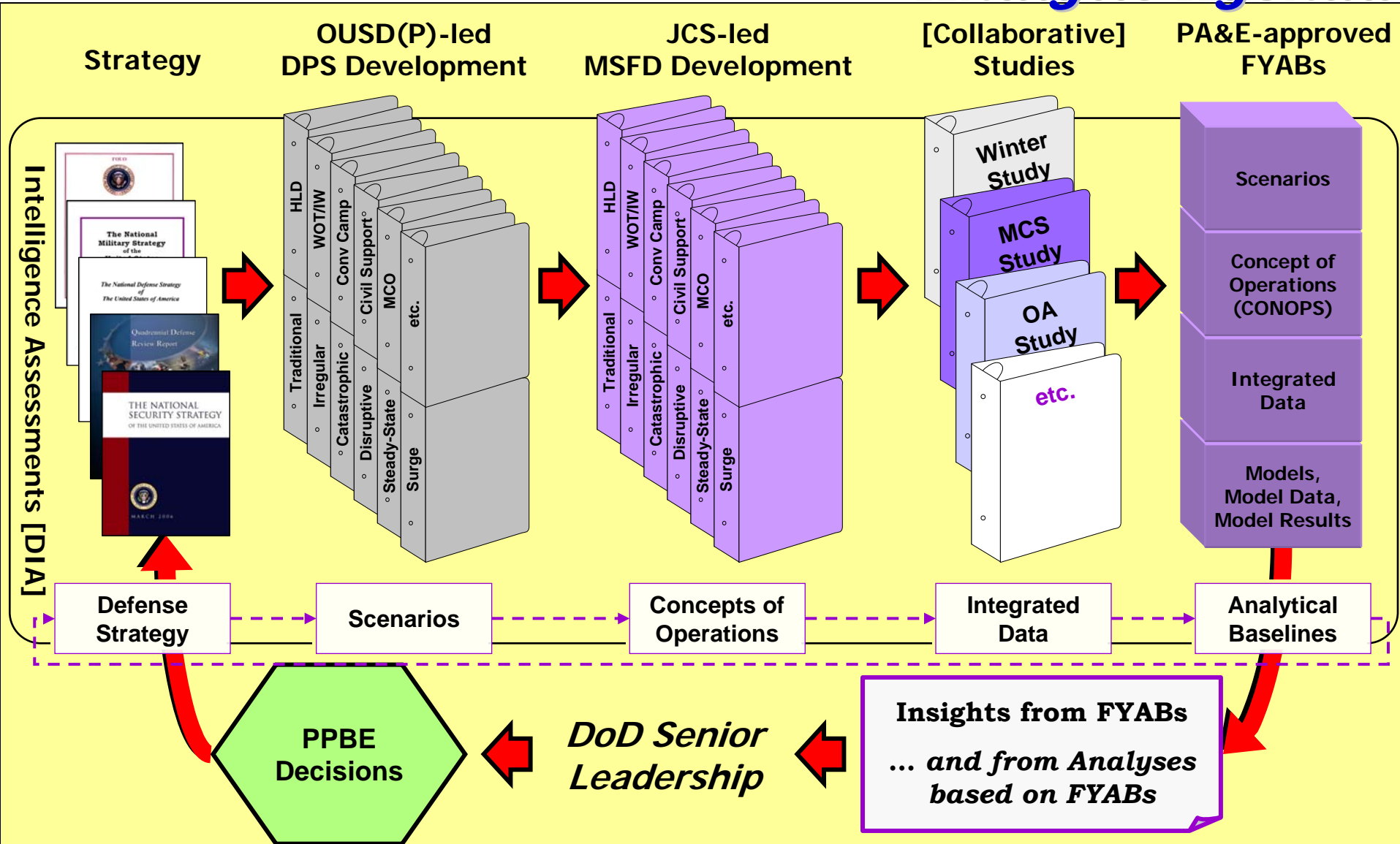
Increasing complexity of the new strategic environment



Force Planning Construct (source: 2006 QDR)



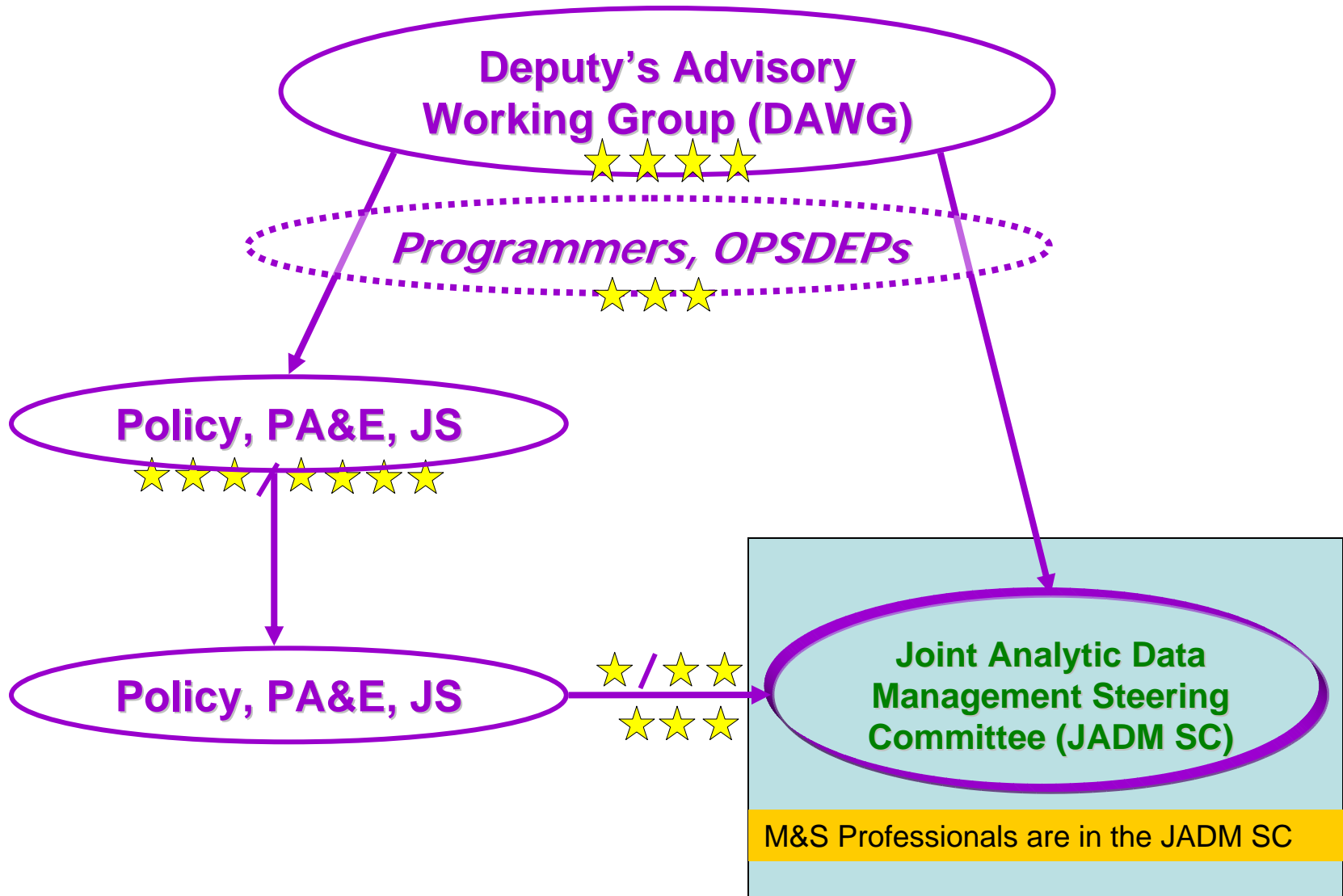
Vision Implemented through the Analytic Agenda



DPS: Defense Planning Scenario

MSFD: Multi-Service Force Deployment

Governance



Analytic Agenda Product Registry

The screenshot shows the Joint Data Support website in a Microsoft Internet Explorer browser window. The address bar displays <https://jds.pae.osd.smil.mil/>. The website's left sidebar contains a navigation menu with the following items: Home (U), What's New (U), Analytic Agenda (U), Scenarios (DPS, MSFD, AB) (U), Studies (U), Forces, Units, Equipment (U), Models and Tools (U), Reference Data and Links (U), Archived Products (U), JDS Web Site Access (U), Acronyms and Abbreviations (U), Suggestions and Feedback (U), and About JDS (U). The main content area features a header with 'Login | Help' and a section titled 'Our Objective' with the text: 'improve data quality', 'reduce study setup time', and 'allow study team to focus on analysis'. A diagram is overlaid on the page, consisting of three purple ovals labeled 'Data', 'Tools', and 'Studies' stacked vertically. A large blue bracket on the left side of the diagram groups these three categories, pointing to the 'Analytic Agenda (U)' and 'Studies (U)' items in the sidebar. At the bottom of the page, there is a disclaimer: '(U) This Web site may not be accessible for users requiring the use of assistive technology. If you cannot access any part of this Web site for this reason, please contact Joint Data Support via email at jdsWeb@pae.osd.smil.mil or Jim Stevens, Director of JDS, at (703) 699-1702. Under Federal Law, JDS is required to provide you the information in an alternate, accessible, format upon your request.' Below this is another line of text: '(U) We welcome feedback on our Web site. Contact us via email at jdsCustomerSupport@pae.osd.smil.mil or (703) 699-1724.'

Data

Tools

Studies

Our Objective
improve data quality
reduce study setup time
allow study team to focus on analysis

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Products available via the JDS SIPRNET Website-<https://jds.pae.osd.smil.mil>

Additional Information Sites

- **M&S Tool Registry**

- Collection of tools, documentation, data, and model POCs:
 - Focus on tools in use or in development (government sponsored)
 - Includes information on user groups and recent uses with study POCs
- Benefits:
 - Promotes collaboration among model users
 - Encourages reuse
 - Provides senior leadership visibility of investments DoD wide
- Access via:
 - JDS Classified Website (SIPR): <https://jds.pae.osd.smil.mil>

- **Wiki and Forum sites on:**

- Scenario Development
- Insurgency and Counterinsurgency (COIN) Analysis
- Irregular Warfare Analysis
- Access via classified website at:
 - forum url: <http://analysiscommunityforum.pae.osd.smil.mil>
 - wiki url: <http://analysiscommunitywiki.pae.osd.smil.mil>

- **Military Operations Research Society (MORS)** [includes DoD, Industry, and Academia]
 - Annual Symposium in June
 - 4-5 workshops each year (recent examples):
 - Analysis of Non-Traditional Security Challenges: Methods & Tools
 - Agent-Based Models & Analytical Tools in support of Stability Ops
 - Publications: Newsletter (*PHALANX*), Journal, and professional books
- **Joint Collaboration Analysis Conference (JCAC)**
 - Semi-annual (spring, fall): led by Joint Staff
 - Focused on combatant commander analysis needs and capabilities
- **Other organizations include:**
 - Institute for Operations Research and Management Science (INFORMS)
 - Military Applications Society (MAS-INFORMS)

Community Identified M&S Challenge Areas

| Operational Areas | Cross-cutting Missions/ Functions |
|------------------------------------------------------------------------------------|---------------------------------------------------|
| Conventional Operations (e.g. MCOs) | Deterrence (Phases 0-4) |
| Irregular Warfare (e.g., COIN, Counter Terrorism) | Representation of ISR |
| Stability, Security, Transition and Reconstruction | C4 and Net-centric Operations |
| Homeland Defense/Defense Support for Cvl Ath | Human Behavior, Social, Cultural (HSCB) Aspects |
| Management Issues | Information Operations including Cyber Warfare |
| Education and Training (analysts, decision makers) | CBRNE Activities |
| Ensuring Credibility of M&S (e.g., VV&A) | Space Operations |
| M&S Governance and Best Practices (e.g., Policies for use of proprietary tools) | Logistics |
| | Joint, Interagency, Multi-national (JIM) Analysis |
| Outreach | Hot Topics |
| Configuration Management (e.g., data, tools, standards) | Portfolio Management |
| | Representation of Complex Adaptive Systems |

Challenges (near term)

- **Irregular Warfare Analysis Tools and Data**
 - Expand M&S in support of analysis of IW issues (DIMEFIL/PMESII, etc))
- **Joint, Interagency, Multinational Analysis**
 - DoD “cannot meet today’s complex challenges alone” (QDR 2006) but must join with coalition, interagency, and other partners. To that end, DoD analysis (using M&S tools and data) must examine interaction between DoD and partner capabilities.
- **QDR 2010: Comprehensive review of the defense strategy.**
 - M&S Tools and Data will help analysis of capabilities required to meet the challenges (Example: TACAIR, IW Capabilities...)
 - Analysis (using M&S tools and data) to inform leadership decisions updating the defense strategy and shaping/sizing the force for the next ten years.